

Testimony from Victor Velculescu, M.D., Ph.D. regarding proposed Mulch Facility

My name is Victor Velculescu and I reside in Dayton, MD. I am a professor of oncology at Johns Hopkins University School of Medicine where I am the Co-Director of Cancer Biology at the Sidney Kimmel Comprehensive Cancer Center. I am also on the Board of Directors of the American Association of Cancer Research, the largest cancer research organization in the United States.

I am here today to speak about the health implications of the proposed mulching operations in the residential area of Dayton. It is clear from the medical literature that industrial wood waste recycling processes result in the generation of wood fragments or mulch that have a number of inherent dangers. You have heard about some of these already in the form of fire risks and water pollution. I would like to focus on health hazards and you will hear from Jim Nickel next on the effects that have already been felt in another community in Maryland.

The two primary hazards from industrial mulch processing are increased exposure to infectious agents, such as fungi and bacteria, and carcinogenic effects of wood dust. Although we often think of wood fragments as something natural, the amount, type, and storage of materials that are generated in an industrial mulch facility are no longer on a scale that we would encounter naturally or that are inherently safe.

These are not theoretical risks. I have shared with you in my submitted testimony a recent case report of a healthy retired gentleman that developed fungal pneumonia after exposure to mulch. He developed kidney injury and failure and died of infections months later. It was clear that fungal spores from mulch were the route of infection. There are dozens of reports in the literature from throughout the world that are related to infectious agents in mulch, primarily fungi and bacteria. Fungal spores can travel large distances on the order of miles and are of particular risk to immune comprised individuals, including children and the elderly. A recent study found that of patients with the disease called fulminant mulch pneumonitis, half of those died to infection and underlying kidney disease.

The second clear health risk is from exposure to wood dust. The Centers for Disease Control (or CDC) has documented that wood dust particles are associated with a variety of health effects including dermatologic effects such as dermatitis, allergic respiratory effects including asthma, and mucosal and nonallergic respiratory effects, including bronchitis, irritation, bleeding, and obstruction, as well as coughing, wheezing, sinusitis, and prolonged colds.

However, the health effect that is of most concern to me is that wood dust has been categorized by the World Health Organization (WHO) and the Centers for Disease Control as a carcinogen. The CDC states: "The association between exposure to wood dust and various forms of cancer has been explored in many studies and in many countries." And the WHO indicates "Wood dust causes cancer of the nasal cavity and paranasal sinuses, and of the nasopharynx. It is carcinogenic to humans." There are hundreds of papers in the medical

literature that document the increased risk from wood dust for nasal cancers, lung cancers, Hodgkin's lymphoma, and potentially other kinds of cancers.

Carcinogens by definition increase the risk of cancer, especially to those exposed over longer periods of time. Dayton is in part a residential community where there are a large number of children and many residents that spend a significant amount of time outdoors and would be directly exposed to the health risks I have described. And of course, many residents plan to live in the community for many years, even their entire lives. To allow exposure to infectious and carcinogenic agents from this type of facility to a large number of individuals in a residential area does not seem to be in the public interest. This would make Dayton the equivalent of a petri dish of health experimentation. Given this and other testimony that you will hear today, I would urge members of the Howard County Council to support legislation that would limit these type of industrial mulching operations to industrial areas and prevent them from occurring in farming, agricultural, conservation, and residential areas like those of Dayton.